```
 NEWS LOGIN     Welcome Banner and News Items
 NEWS IPC8      For general information regarding STN implementation of IPC 8
 NEWS X25       X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that
specific topic.

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* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 18:34:10 ON 14 MAR 2007

=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'REGISTRY' ENTERED AT 18:34:25 ON 14 MAR 2007
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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provided by InfoChem.

STRUCTURE FILE UPDATES:    13 MAR 2007  HIGHEST RN 926304-31-6
DICTIONARY FILE UPDATES:   13 MAR 2007  HIGHEST RN 926304-31-6

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

  Please note that search-term pricing does apply when
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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10789008.str
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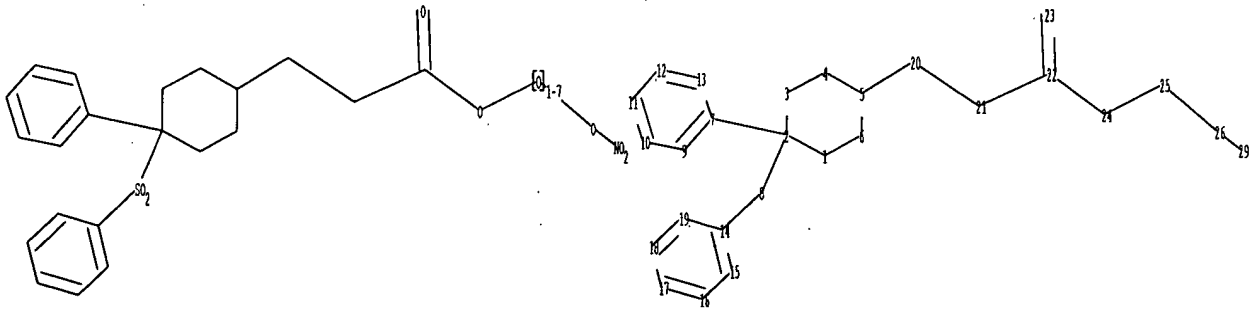
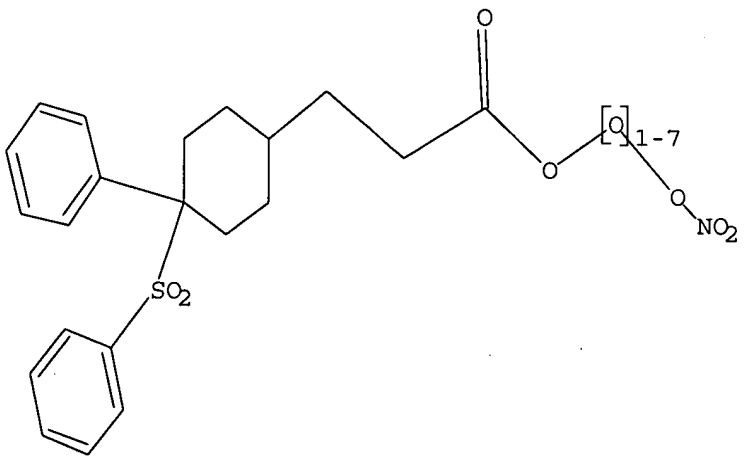


chain nodes :
8 20 21 22 23 24 25 26 29
ring nodes :
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19
chain bonds :
2-7 2-8 5-20 8-14 20-21 21-22 22-23 22-24 24-25 25-26 26-29
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-9 7-13 9-10 10-11 11-12 12-13 14-15 14-19
15-16 16-17 17-18 18-19
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 5-6 22-23 22-24 26-29
exact bonds :
2-7 2-8 5-20 8-14 20-21 21-22 24-25 25-26
normalized bonds :
7-9 7-13 9-10 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 29:CLASS

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



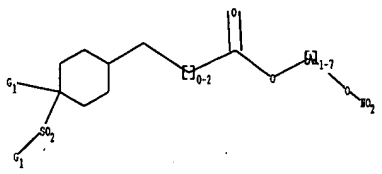
Structure attributes must be viewed using STN Express query preparation.

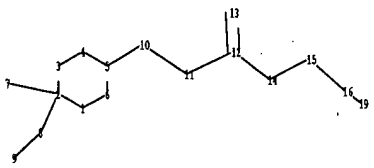
=> s l1 full
FULL SEARCH INITIATED 18:34:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\10789008a.str





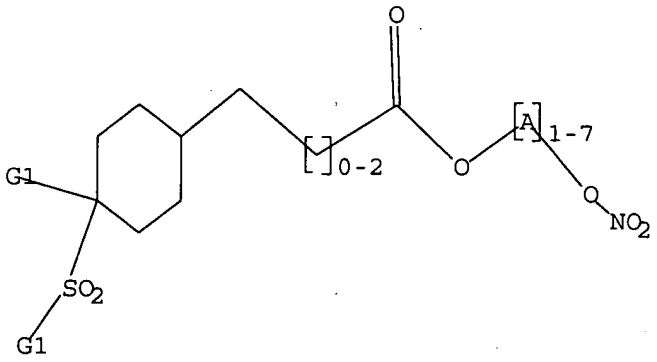
chain nodes :
7 8 9 10 11 12 13 14 15 16 19
ring nodes :
1 2 3 4 5 6
chain bonds :
2-7 2-8 5-10 8-9 10-11 11-12 12-13 12-14 14-15 15-16 16-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 2-3 2-7 3-4 4-5 5-6 8-9 12-13 12-14 14-15 15-16 16-19
exact bonds :
2-8 5-10 10-11 11-12

G1:Cb,Cy,Hy

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS

L3 STRUCTURE UPLOADED

=> d
L3 HAS NO ANSWERS
L3 STR



G1 Cb,Cy,Hy

Structure attributes must be viewed using STN Express query preparation.

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=> s l3 full
FULL SEARCH INITIATED 18:36:45 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -       69 TO ITERATE

100.0% PROCESSED       69 ITERATIONS                                 1 ANSWERS
SEARCH TIME: 00.00.01

L4             1 SEA SSS FUL L3

=> d l4
```
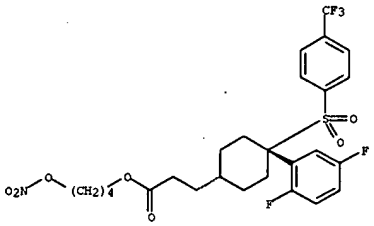

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 749251-24-9 REGISTRY
ED Entered STN: 22 Sep 2004
CN Cyclohexanepropanoic acid, 4-(2,5-difluorophenyl)-4-[[4-(trifluoromethyl)phenyl]sulfonyl]-, 4-(nitrooxy)butyl ester, cis- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H28 F5 N O7 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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=>  file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   347.05     347.26

FILE 'CAPLUS' ENTERED AT 18:36:58 ON 14 MAR 2007
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FILE COVERS 1907 - 14 Mar 2007  VOL 146 ISS 12
FILE LAST UPDATED: 13 Mar 2007  (20070313/ED)

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They are available for your review at:

http://www.cas.org/infopolicy.html

=> s l4
L5              1 L4

=> d l5
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L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:722921 CAPLUS
DN 141:236684
TI Method and materials for treatment of Alzheimer's disease
IN Castro Pineiro, Jose Luis
PA UK
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004171683	A1	20040902	US 2004-789008	20040227
PRAI	GB 2003-4524	A	20030227		

OS MARPAT 141:236684

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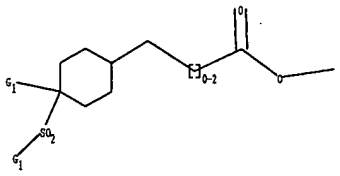
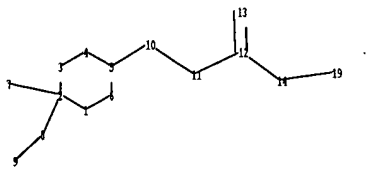
Uploading C:\Program Files\Stnexp\Queries\10789008b.str





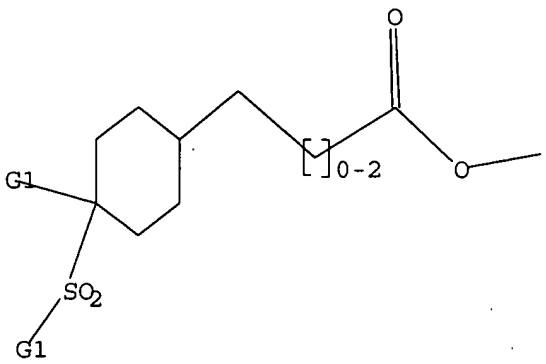
chain nodes :
7 8 9 10 11 12 13 14 19
ring nodes :
1 2 3 4 5 6
chain bonds :
2-7 2-8 5-10 8-9 10-11 11-12 12-13 12-14 14-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 2-3 2-7 3-4 4-5 5-6 8-9 12-13 12-14 14-19
exact bonds :
2-8 5-10 10-11 11-12

G1:Cb,Cy,Hy

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 19:Atom

L6 STRUCTURE UPLOADED

=> d
L6 HAS NO ANSWERS
L6 STR



G1 Cb,Cy,Hy

Structure attributes must be viewed using STN Express query preparation.

=> s l6 full
   REGlstRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 18:42:15 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 25032 TO ITERATE

100.0% PROCESSED 25032 ITERATIONS 9 ANSWERS
SEARCH TIME: 00.00.01

L7 9 SEA SSS FUL L6

L8 5 L7

=> d l8 1-5 ibib abs hitstr

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1226125 CAPLUS
DOCUMENT NUMBER: 146:7695
TITLE: Aryl cyclohexyl sulphones and their preparation and use for treatment of cancer
INVENTOR(S): Lewis, Huw David; Harrison, Timothy; Shearman, Mark Steven
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: PCT Int. Appl., 41pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006123182	A2	20061123	WO 2006-GB50107	20060516
WO 2006123182	A3	20070111		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: GB 2005-9929 A 20050517
GB 2005-21538 A 20051024
OTHER SOURCE(S): MARPAT 146:7695
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

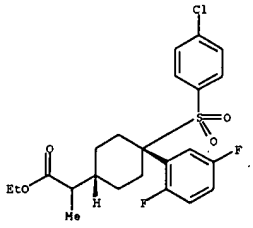
AB Sulfones of formula I are disclosed for use in treatment of cancer. Compds. of formula I wherein n is 0 and 1; Z is CN, OH and derivs., CO2H and derivs., and CONH2 and derivs.; R1b is H, C1-4 alkyl and OH; R1c is H and C1-4 alkyl; Ar1 is (un)substituted Ph and (un)substituted pyridine; Ar2 is (un)substituted phenyl; and their pharmaceutically acceptable salts are claimed. Example compound cis- and trans-II was prepared by hydride reduction of III. All the invention compds. were evaluated for their anticancer activity.

IT 471903-67-0P 471905-40-5P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate and intermediate; preparation of aryl cyclohexyl sulfones useful in the treatment of cancer)

RN 471903-67-0 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, cis- (CA INDEX NAME)

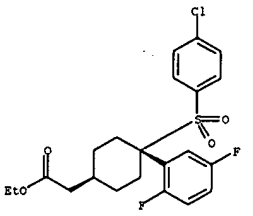
Relative stereochemistry.

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

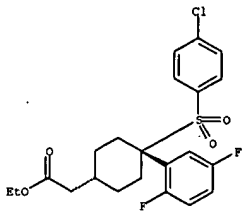


RN 471905-54-1 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, trans- (CA INDEX NAME)

Relative stereochemistry.

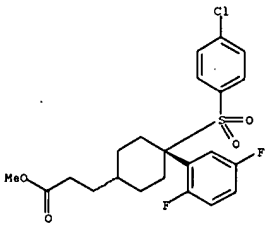


L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 471905-40-5 CAPLUS
CN Cyclohexanepropanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, methyl ester, cis- (CA INDEX NAME)

Relative stereochemistry.



IT 471905-47-2P 471905-54-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of aryl cyclohexyl sulfones useful in the treatment of cancer)

RN 471905-47-2 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-methyl-, ethyl ester, cis- (CA INDEX NAME)

Relative stereochemistry.

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:722921 CAPLUS
DOCUMENT NUMBER: 141:236684
TITLE: Method and materials for treatment of Alzheimer's disease
INVENTOR(S): Castro Pineiro, Jose Luis
PATENT ASSIGNEE(S): UK
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004171683	A1	20040902	US 2004-789008	20040227

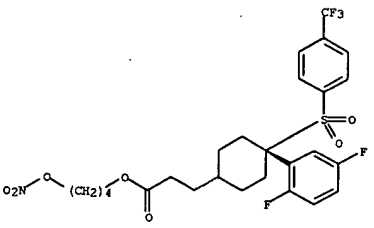
PRIORITY APPLN. INFO.: GB 2003-4524 A 20030227
OTHER SOURCE(S): MARPAT 141:236684

AB The invention provides the combined use of an inhibitor of formation or release of β-amyloid and a nitric oxide releaser for the treatment or prevention of Alzheimer's disease.

IT 749251-24-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(treatment of Alzheimer's disease)

RN 749251-24-9 CAPLUS
CN Cyclohexanepropanoic acid, 4-(2,5-difluorophenyl)-4-[[4-(trifluoromethyl)phenyl]sulfonyl]-, 4-(nitrooxy)butyl ester, cis- (9CI) (CA INDEX NAME)

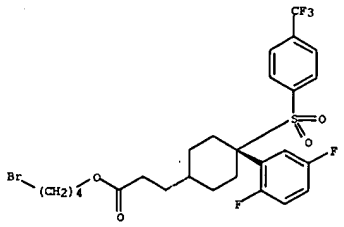
Relative stereochemistry.



IT 749251-21-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(treatment of Alzheimer's disease)

RN 749251-21-6 CAPLUS
CN Cyclohexanepropanoic acid, 4-(2,5-difluorophenyl)-4-[[4-(trifluoromethyl)phenyl]sulfonyl]-, 4-bromobutyl ester, cis- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Relative stereochemistry.



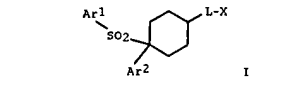
L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:308409 CAPLUS
DOCUMENT NUMBER: 140:321108
TITLE: Preparation of aryl cyclohexyl sulfones as γ-secretase inhibitors useful against Alzheimer's disease
INVENTOR(S): Churcher, Ian; Harrison, Timothy; Kerrad, Sonia; Oakley, Paul Joseph; Shaw, Duncan Edward; Teall, Martin Richard; Williams, Susannah
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004031137	A1	20040415	WO 2003-GB4102	20030925
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2500964	A1	20040415	CA 2003-2500964	20030925
AU 2003267614	A1	20040423	AU 2003-267614	20030925
EP 1551797	A1	20050713	EP 2003-748306	20030925
EP 1551797	B1	20070221		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006501292	T	20060112	JP 2004-540927	20030925
US 2004122050	A1	20040624	US 2003-679557	20031006
US 7101895	B2	20060905		
PRIORITY APPLN. INFO.:			GB 2002-23039 A	20021004
			WO 2003-GB4102 W	20030925
OTHER SOURCE(S):	MARPAT 140:321108			

GI

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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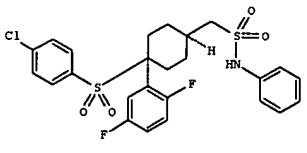


II

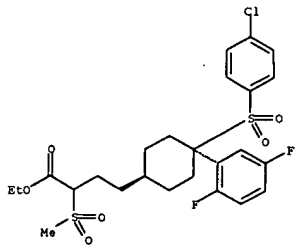
AB Aryl cyclohexyl sulfones (shown as I; variables defined below; e.g. II) inhibit the processing of APP by γ-secretase, and hence are useful in treatment of Alzheimer's disease. For I: X = SCN, SR1, S(O)R1, (CRaRb)mSO2R1, SO2N(R2)2, SO2NHCOR1, SO2NHN(R2)2, OSO2N(R2)2, OS(O)N(R2)2, OSO2NHCOR1, COR4, NHCOR1, NHCO2R1, NHCON(R2)2, NHSO2R1 or NHSO2N(R2)2; L = a bond, :CH- or -(CHRa)n- with provisos; n = 1-3; Ar1 and Ar2 = Ph or heteroaryl, either of which bears 0-3 halogen, CN, NO2, CF3, CHF2, OH, OCF3, CHO, CH:NOH, C1-4-alkoxy, C1-4-alkoxycarbonyl, C2-6-acyl, C2-6-alkenyl, and C1-4-alkyl; Ra = H, alkyl; Rb = H, alkyl, CO2H, alkoxycarbonyl, alkylsulfonyl; R1 = CF3, (substituted) alkyl, alkenyl, cycloalkyl, cycloalkylalkyl, aryl(alkyl), heterocyclyl(alkyl); R2 = H, (substituted) alkoxy, alkyl, alkenyl, cycloalkyl, cycloalkylalkyl; R3 = H, alkyl, Ph, heteroaryl; R4 = CRaRbSO2R1, pyridine N-oxide, substituted Ph, heteroaryl; addnl. details are given in the claims. Although the methods of preparation are not claimed, example prepns. and/or characterization data are included for <180 examples of I and some intermediates. For example, II was prepared from excess aniline and [cis-4-(4-chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]methanesulfonyl chloride, which was prepared from SO2Cl2, KNO3 and [cis-4-(4-chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]methanethiol, which was prepared from in 2 steps from iodo(cis-4-(4-chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]methane, which was prepared photochem. from [cis-4-(4-Chlorophenylsulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]acetic acid, iodoisobenzene diacetate and I2. The examples all had an ED50 against γ-secretase of <1 μM, typically <0.5 μM, in most cases <100 nM, and in preferred cases <10 nM.

IT 679432-31-6P, 4-[cis-4-(4-Chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]-2-(methanesulfonyl)butyric acid ethyl ester
679432-33-8P, 4-[cis-4-(4-Chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]-2-ethyl-2-(methanesulfonyl)butyric acid ethyl ester
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of aryl cyclohexyl sulfones as γ-secretase inhibitors useful against Alzheimer's disease)

RN 679432-31-6 CAPLUS
CN Cyclohexanebutanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-(methylsulfonyl)-, ethyl ester, cis- (9CI) (CA INDEX NAME)

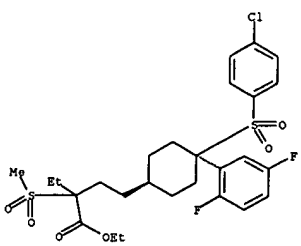
L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Relative stereochemistry.



RN 679432-33-8 CAPLUS
CN Cyclohexanebutanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-ethyl-α-(methylsulfonyl)-, ethyl ester, cis- (9CI) (CA INDEX NAME)

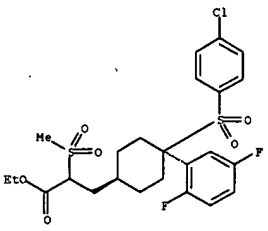
Relative stereochemistry.



IT 679432-32-7P, 3-[cis-4-(4-Chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]-2-(methanesulfonyl)propionic acid ethyl ester
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of aryl cyclohexyl sulfones as γ-secretase inhibitors useful against Alzheimer's disease)

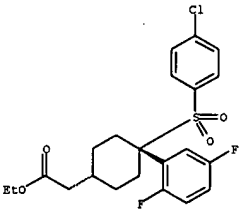
RN 679432-32-7 CAPLUS
CN Cyclohexanepropanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-(methylsulfonyl)-, ethyl ester, cis- (9CI) (CA INDEX NAME)

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Relative stereochemistry.



IT 471903-67-0, [cis-4-(4-Chlorobenzenesulfonyl)-4-(2,5-difluorophenyl)cyclohexyl]acetic acid ethyl ester
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aryl cyclohexyl sulfones as γ-secretase inhibitors useful against Alzheimer's disease)
RN 471903-67-0 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, cis- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

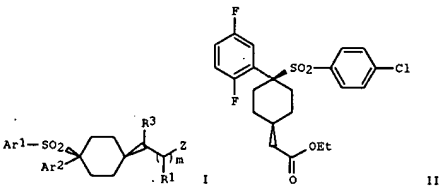
ACCESSION NUMBER: 2003:173575 CAPLUS
DOCUMENT NUMBER: 138:221350
TITLE: Preparation of 1-phenyl-1-(arylsulfonyl)cyclohexanes for treatment of Alzheimer's disease
INVENTOR(S): Churcher, Ian; Dinnell, Kevin; Harrison, Timothy; Kerrad, Sonia; Nadin, Alan John; Oakley, Paul Joseph; Shaw, Duncan Edward; Teall, Martin Richard; Williams, Brian John; Williams, Susannah
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018543	A1	20030306	WO 2002-GB3806	20020816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2002081435	A1	20021017	WO 2001-GB3741	20010821
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2456420	A1	20030306	CA 2002-2456420	20020816
EP 1421062	A1	20040526	EP 2002-758542	20020816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011635	A	20040713	BR 2002-11635	20020816
HU 200401241	A2	20041129	HU 2004-1241	20020816
JP 2005501120	T	20050113	JP 2003-523207	20020816
JP 3711131	B2	20051026		
NZ 530581	A	20060428	NZ 2002-530581	20020816
ZA 2004000406	A	20041028	ZA 2004-406	20040120
IN 2004CN00345	A	20051223	IN 2004-CN345	20040219
NO 2004001185	A	20040319	NO 2004-1185	20040319

PRIORITY APPLN. INFO.:
GB 2001-20347 A 20010821
WO 2001-GB3741 W 20010821
GB 2001-8591 A 20010405
WO 2002-GB3806 W 20020816

OTHER SOURCE(S): MARPAT 138:221350
GI

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



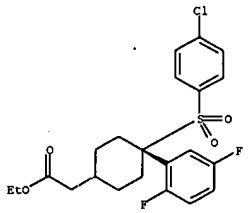
I II

AB Title sulfones I [wherein m = 0-1; Z = CN, OR2, CO2R2, or CON(R2)2; R1 = H, alkyl, or OH; R2 and R4 = independently H or (un)substituted alkyl, cycloalkyl(alkyl), alkenyl, or (hetero)aryl; or N(R2)2 or N(R4)2 = independently (un)substituted heterocyclyl; R3 = H or alkyl; or pharmaceutically acceptable salts thereof] were prepared For example, oxidative coupling of 4-chlorothiophenol with 2,5-difluorobenzyl bromide gave 1-[[(4-chlorophenyl)sulfonyl]methyl]-2,5-difluorobenzene. Reaction with Me acrylate and KOBu in THF, followed by heating to 150° for 2 h in a solution of DMSO, NaCl, and H2O afforded 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexanone. Condensation of the ketone with Et (diethoxyphosphinyl)acetate in the presence of NaH in THF provided the alkylidene derivative (88%), which was reduced with NaBH4 to give (cis)-II (36%). I modulate the processing of amyloid precursor protein by γ-secretase and hence are useful in the treatment or prevention of Alzheimer's disease (no data).

IT 471903-67-0P 471905-40-5P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(anti-Alzheimer's agent; preparation of phenylcyclohexyl aryl sulfones for treatment of Alzheimer's disease)
RN 471903-67-0 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, cis- (CA INDEX NAME)

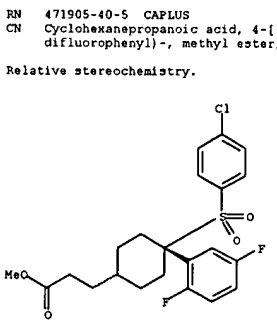
Relative stereochemistry.

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 471905-40-5 CAPLUS
CN Cyclohexanepropanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, methyl ester, cis- (CA INDEX NAME)

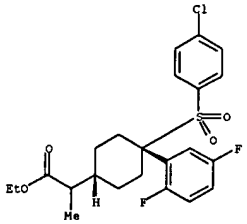
Relative stereochemistry.



IT 471905-47-2P 471905-54-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(anti-Alzheimer's agent; preparation of phenylcyclohexyl aryl sulfones for treatment of Alzheimer's disease)
RN 471905-47-2 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-methyl-, ethyl ester, cis- (CA INDEX NAME)

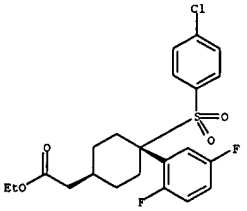
Relative stereochemistry.

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 471905-54-1 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, trans- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:793593 CAPLUS
DOCUMENT NUMBER: 137:310695
TITLE: Preparation of aryl sulfones which modulate the action of gamma secretase
INVENTOR(S): Castro Pineiro, Jose Luis; Churcher, Ian; Dinnell, Kevin; Harrison, Timothy; Kerrad, Sonia; Nadin, Alan John; Oakley, Paul Joseph; Owens, Andrew Pate; Shaw, Duncan Edward; Teall, Martin Richard; Williams, Brian John; Williams, Susannah
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: PCT Int. Appl., 159 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002081435	A1	20021017	WO 2001-GB3741	20010821
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2442882	A1	20021017	CA 2001-2442882	20010821
EP 1379498	A1	20040114	EP 2001-958247	20010821
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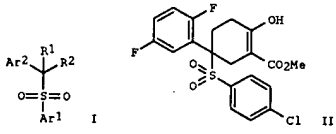
JP 2004533428	T	20041104	JP 2002-579423	20010821
CA 2456420	A1	20030306	CA 2002-2456420	20020816
WO 2003018543	A1	20030306	WO 2002-GB3806	20020816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1421062	A1	20040526	EP 2002-758542	20020816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011635	A	20040713	BR 2002-11635	20020816
CN 1545501	A	20041110	CN 2002-816325	20020816
HU 200401241	A2	20041129	HU 2004-1241	20020816
JP 2005501120	T	20050113	JP 2003-523207	20020816
JP 3711131	B2	20051026		
NZ 530581	A	20060428	NZ 2002-530581	20020816
US 2003114496	A1	20030619	US 2002-223993	20020820
US 6984663	B2	20060110		
US 2004116404	A1	20040617	US 2003-473727	20031001
IN 2004CN00345	A	20051223	IN 2004-CN345	20040219
NO 2004001185	A	20040319	NO 2004-1185	20040319

L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

US 2006041020	A1	20060223	US 2005-261365	20051028
PRIORITY APPLN. INFO.:			GB 2001-8591	A 20010405
			GB 2001-20347	A 20010821
			WO 2001-GB3741	W 20010821
			WO 2002-GB3806	W 20020816
			US 2002-223993	A1 20020820

OTHER SOURCE(S): MARPAT 137:310695
GI

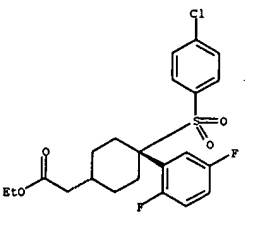


AB Title compds. I [R1 and R2 together from a (un)substituted saturated or unsatd. ring of 4-7 atoms of which at most 2 are selected from N, O, and S with the remaining being C; Ar1 and Ar2 independently equal (un)substituted aryl or heteroaryl] and their pharmaceutically acceptable salts are disclosed as modulators of gamma secretase (no data). Thus, II was prepared via condensation of 4-chlorothiophenol with 2,5-difluorobenzyl bromide, oxidation of intermediate thioether and subsequent cyclization with Me acrylate. As modulators of the action of g-secretase, I are useful in the treatment or prevention of Alzheimer's disease.

IT 471903-67-0P 471905-40-5P 471905-47-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of aryl sulfones as modulators of gamma secretase useful for the treatment of Alzheimer's disease)

RN 471903-67-0 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, cis- (CA INDEX NAME)

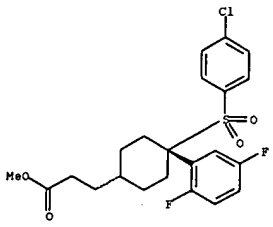
Relative stereochemistry.



L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

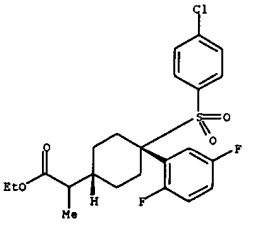
RN 471905-40-5 CAPLUS
CN Cyclohexanepropanoic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, methyl ester, cis- (CA INDEX NAME)

Relative stereochemistry.



RN 471905-47-2 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-α-methyl-, ethyl ester, cis- (CA INDEX NAME)

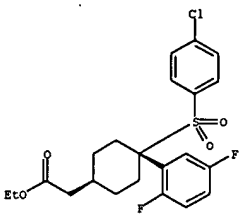
Relative stereochemistry.



IT 471905-54-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of aryl sulfones as modulators of gamma secretase useful for the treatment of Alzheimer's disease)

RN 471905-54-1 CAPLUS
CN Cyclohexaneacetic acid, 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)-, ethyl ester, trans- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT